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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,034	06/28/2001	Sam-Chul Ha	P/923-340	5497
2352	7590	04/19/2004	EXAMINER	
OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403			MOORE, KARLA A	
			ART UNIT	PAPER NUMBER

1763

DATE MAILED: 04/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AC

Office Action Summary	Application No. 09/894,034	Applicant(s) HA ET AL.	
	Examiner Karla Moore	Art Unit 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7,11-15,17,18,20,21,23 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7,11-15,17,18,20,21,23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-4 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,437,324 to Sando et al. in view of U.S. Patent No. 5,196,100 to Goffetre et al.
3. Sando et al. disclose a continuous processing apparatus capable of plasma polymerization substantially as claimed, the apparatus having a plurality of chambers to perform a surface processing such as plasma polymerization on a surface of a substance being moved into the chamber, the apparatus comprising: at least one vertical chamber (a plurality of vertical chambers are formed by partition walls (8) in which the substance (2) is moved vertically and at least one electrode (12) disposed in parallel to the movement direction of the substance included therein; wherein the vertical chamber includes substance pass holes (where substrate moves horizontally to an adjacent chamber) formed at first and second sides thereof and/or top and bottom sides thereof.
4. However, Sando et al. fail to disclose a chamber body with one side thereof being opened and a chamber door combined to the opened side for the chamber body.
5. Goffetre et al. teach the use of pivoting doors supporting electrodes parallel to the substance movement direction in a vertical deposition chamber for the purpose of providing operators with access to the electrodes when necessary (column 4, rows 46-49).
6. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided doors for the electrodes Sando et al. in order to provide the operators with access to the electrodes when necessary as taught by Goffetre et al.

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7. With respect to claim 3, each chamber in Sando et al. comprises a plurality of electrodes that are disposed in parallel to the movement of the movement direction of a substance in the chamber (see Figure 2).

8. With respect to claim 4, which is drawn to an intended use of the apparatus with no additional structural limitations, the courts have ruled a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

9. With respect to claim 11, the apparatus of Sando et al. can further be described as a continuous processing apparatus capable of plasma polymerization, the apparatus having a plurality of chambers to perform a surface processing such as plasma polymerization on a surface of a substance being moved into the chamber, the apparatus comprising: at least one vertical chamber (formed by any two adjacent partition plates both extending from the top or the bottom wall) in which the substance is vertically moved and at least one electrode (12) therein; wherein the vertical chamber includes a partition plate (extending from an a wall opposite the wall from which the two adjacent partition plates extend), so that the vertical chamber is divided into two vertical areas by the partition plate.

10. With respect to claim 12, in Sando et al. the movement direction of a substance is opposite (the substance travels upwards on one side of the partition and down on the other) in each of the two vertical areas.

11. With respect to claim 13, in Sando et al. each of the areas includes at least one electrode disposed in parallel to the movement of the direction as illustrated in Figure 2.

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sando and Goffetre et al. as applied to claims 1, 3-4 and 11-13 above, and further in view of U.S. Patent No. 5,595,792 to Kashiwaya et al.

13. Sando et al. and Goffetre et al. disclose the invention substantially as claimed and as described above.

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14. However, Sando et al. and Goffetre et al. fail to teach using a power supply unit to render the substance itself an electrode by contacting the roller as power is supplied to the roller.

15. Kashiwaya discloses an apparatus comprising at least one roller (49) contacted by the substance being moved; and a power supply unit (52) for rendering the substance itself an electrode by contacting the roller as power is applied to the roller (column 6, rows 46-56) for the purpose of promoting film forming.

16. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a power supply unit to render the substrate itself an electrode by contacting the roller as power is supplied to the roller in Sando et al. and Goffetre et al. in order to promote film forming as taught by Kashiwaya et al.

17. Claims 14-15, 17-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,389,970 to Edgerton in view of U.S. Patent No. 5,196,100 to Goffetre et al.

18. Edgerton discloses a continuous processing apparatus capable of plasma polymerization in Figure 1 substantially as claimed, the apparatus having a plurality of chambers (28, 30 and 32) to perform a surface processing such as plasma polymerization on a surface of the substance (10) being moved into a chamber, comprising: at least one vertical chamber (28) in which a substance (10) is vertically moved and at least one electrode (46) disposed parallel to the movement direction of the substance included therein; the electrode is disposed in the chamber body or at the chamber door; and a second vertical chamber (32) in which a substance is moved vertically, having at least one electrode (46) and being disposed vertically apart with a certain distance from the first vertical chamber by horizontal chamber (30). The apparatus further includes a horizontal chamber having a pass hole formed at the left and right sides thereof so that the substance can pass there through. The vertical deposition chambers have pass holes (column 4, rows 46-51) formed at the top and bottom thereof.

19. However, Edgerton fails to teach electrodes facing both the upper and lower surfaces or the electrodes at the inner side of upper and lower doors, which open and close upwardly and downwardly.

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20. Goffetre et al. teach the use of two electrodes for coating both surfaces of a substrate and (see Figure 1) and pivoting doors supporting electrodes parallel to the substance movement direction in a vertical deposition chamber for the purpose of providing operators with access to the electrodes when necessary (column 4, rows 46-49). The doors would obviously open upwardly and downwardly to provide access to the electrodes which are placed above and below the substrate.

21. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided doors for the electrodes in Edgerton in order to provide the operators with access to the electrodes when necessary as taught by Goffetre et al.

22. With respect to claim 15, which is drawn to an intended use of the apparatus with no addition structural limitations, the courts have ruled a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

23. With respect to claims 17, 18 and 20, Edgerton discloses that each of the chambers is capable of supplying a processing gas and conducting plasma processing, therefore, the first chamber (28) could be used as a pre-processing chamber and the third chamber (32) could be used as a post-processing chamber as claimed. Also, the vertical chambers are identical with the exception of the movement direction of the substance and would be capable of supporting the same processing conditions.

24. Further, Examiner again notes that when it comes to the intended use of an apparatus where no additional structural limitations are presented, the courts have ruled a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

25. Claims 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,389,970 to Edgerton in view of U.S. Patent No. 5,196,100 to Goffetre et al.

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26. Edgerton discloses a continuous processing apparatus capable of plasma polymerization in Figures 1 and 2, with a vertical chamber, the apparatus comprising: an unwinding chamber (14) having an unwinding roll (12) for unwinding a substance (10) wound thereon, a winding chamber (18) having a winding roll (16) for winding a surface-processed substance, a deposition chamber (28) in which the substance is surface processed by plasma discharging after being conveyed from the unwinding chamber, the substance being vertically movable in the deposition chamber; and at least one electrode (46) is disposed in the chamber body or at the chamber door; wherein the vertical chamber includes substance pass holes (column 4, rows 46-51) formed at the first and second sides thereof and/or top and bottom sides thereof.

27. However, Edgerton discloses a chamber body with one side thereof being opened and a chamber door combined to the opened side for the chamber body.

28. Goffetre et al. teach the use of pivoting doors supporting electrodes parallel to the substance movement direction in a vertical deposition chamber for the purpose of providing operators with access to the electrodes when necessary (column 4, rows 46-49).

29. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided doors for the electrodes Edgerton in order to provide the operators with access to the electrodes when necessary as taught by Goffetre et al.

30. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Edgerton and Goffetre et al. as applied to claim 21 above, and further in view of U.S. Patent No. 5,595,792 to Kashiwaya et al.

31. Edgerton and Goffetre et al. disclose the invention substantially as claimed and as described above.

32. However, Edgerton and Goffetre et al. fail to teach using a power supply unit to render the substance itself an electrode by contacting the roller as power is supplied to the roller.

33. Kashiwaya discloses an apparatus comprising at least one roller (49) contacted by the substance being moved; and a power supply unit (52) for rendering the substance itself an electrode by contacting

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the roller as power is applied to the roller (column 6, rows 46-56) for the purpose of promoting film forming.

34. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a power supply unit to render the substrate itself an electrode by contacting the roller as power is supplied to the roller in Edgerton and Goffetre et al. in order to promote film forming as taught by Kashiwaya et al.

35. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,389,970 to Edgerton in view of U.S. Patent No. 4,437,324 to Sando et al. and U.S. Patent No. 5,196,100 to Goffetre et al.

36. Edgerton discloses a continuous processing apparatus capable of plasma polymerization in Figure 1 substantially as claimed, the apparatus having a plurality of chambers (28, 30 and 32) to perform a surface processing such as plasma polymerization on a surface of the substance (10) being moved into a chamber, comprising: at least one vertical chamber (28) in which a substance (10) is vertically moved and at least one electrode (46) disposed parallel to the movement direction of the substance included therein; the electrode is disposed in the chamber body or at the chamber door; and a second vertical chamber (32) in which a substance is moved vertically, having at least one electrode (46) and being disposed vertically apart with a certain distance from the first vertical chamber by horizontal chamber (30). The apparatus further includes a horizontal chamber having a pass hole formed at the left and right sides thereof so that the substance can pass there through. The vertical deposition chambers have pass holes (column 4, rows 46-51) formed at the top and bottom thereof.

37. However, Edgerton fails to teach each of the first and second chambers as integrated chambers, with each of the chambers comprising a partition plate at the center thereof to divide each chamber into two areas.

38. Sando et al. disclose an integrated chamber comprising a partition to divide a chamber into two areas for the purpose of creating a zig-zag path for the substrate so that the when transported the

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substrate is subjected to a zig-zag path with snaky undulations which increases the treating time with plasma (column 4, rows 1-11).

39. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided each of the vertical chambers in Edgerton with a partition in order to form an integrated chamber with a zig-zag like path for subjecting a substrate to an apparatus with an increased plasma treating time as taught by Sando et al.

40. Edgerton and Sando et al. disclose the invention substantially as claimed and as described above.

41. However, Edgerton and Sando et al. fail to teach first and second doors having an electrode at an inner side thereof disposed in parallel to the movement of the substance and opening and closing the left and right side of the chamber body.

42. Goffetre et al. teach the use of pivoting doors supporting electrodes parallel to a substrate movement direction in a vertical deposition chamber for the purpose of providing operators with access to the electrodes when necessary (column 4, rows 46-49). The doors would obviously open to the left and right in order to provide access to the electrodes which are placed on the sides of the substrate.

43. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided doors for the electrodes in Edgerton and Sando et al. in order to provide the operators with access to the electrodes when necessary as taught by Goffetre et al.

Response to Arguments

44. In response to applicant's argument regarding the presently pending independent claims and position that Goffetre et al. fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., an electrode with a *shape of a plate is attached in the chamber body or at the chamber door so that only one face thereof participates in plasma discharging*) are not recited in the rejected claim(s). The claim does not mention the shape of the electrode, nor does it necessitate that the electrode is attached in the chamber body or at the chamber door so that only one

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face thereof participates in plasma discharging. Applicant's arguments are not commensurate with the *claimed* invention. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

45. Further with respect to claim 1 and those claims dependent on claim 1, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Examiner notes that Goffetre et al. discloses an electrode attached to a door. Sando et al. and Edgerton discloses a plate shaped electrodes. The rejections are made using combinations of these references, not Goffetre et al. alone.

46. In conclusion, Examiner notes that the recombination of the claimed subject matter of the pending claims does not change the fact that the claimed subject matter is disclosed with accompanying motivation in the cited prior art. The rejections of the previous office action have only been updated in an effort to address Applicant's amendments.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 571.272.1440. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on 571.272.1439. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

km
14 April 2004


Parviz Hassanzadeh
Primary Examiner
Art Unit 1763